



ABN 46 091 597 661

20 Jensen Rd Banyo 4014

Insitu Geotech Services Pty Ltd

IGS

PLANT HAZARD ASSESSMENT

RIG: "EUNICE" – Truck-mounted Testing Rig
SITE/PROJECT: Generic Project

Personnel Involved	Assessed By	Project Operator	Off-Sider (may be two)	Notes re Operator/Off-Sider Training
	Allan McConnell			In situ testing is a "niche" business with very few rigs in Australia. There are no specific training courses or certificates available. IGS undertakes our own in-house training, much of this on-the-job. Off-siders may be trainee rig operators, or even well-experienced trained operators working as assistant to a newly trained operator for mentoring purposes.
Qualifications/Training:	Registered Professional Engineer			
General Notes:	This Risk Assessment was made on the date shown below. It is a part of IGS's normal operation that the rig is also inspected daily in a pre-start as a precaution against changes that may have occurred (eg equipment failures or modifications) that may impact on risk. This is recorded on the Operator's Daily Record Sheet.			

GENERAL INFORMATION ON THE RIG



Purpose-built rig on 6x4 Hino 700 Truck Base

Year Built: 2009 Registration: 539-LCU

On-board broadband

Differential GPS

Mass 22t

Push capability (up to 200kN)

Test Types:

- Geomil CPT & CPTu
- Tee-Bar
- DMT & SDMT
- Vane Shear

Also:

- Piezometers
- Standpipes
- Vertek piston sampling
- Eziprobe Sampling



ABN 46 091 597 661

20 Jensen Rd Banyo 4014

Insitu Geotech Services Pty Ltd



PLANT HAZARD ASSESSMENT

RIG: "EUNICE" – Truck-mounted Testing Rig

SITE/PROJECT: Generic Project

RISK ASSESSMENT

No	Potential Hazard	Checked			Control Methods in Place	Adequate		Notes on Existing Controls or Additional Control Required	Action Date	Done Date
		Yes	No	N/A		Yes	No			

1 CRUSHING AND CUTTING - Can any person be crushed or cut due to:

1.1	unexpected movement of the rig	√			truck can only start in neutral	√				
					reversing/travel alarm	√				
					amber flashing beacon	√				
					rear view mirror	√				
					pedals/controls non-slip	√				
					controls have appropriate knobs	√				
					reversing lights fitted	√				
					reversing camera fitted	√				
1.2	lack of capacity for plant to be slowed, stopped or immobilised	√			park brake operational	√				
					battery isolator fitted	√				
					total rig system isolator fitted	√				
					drive system is deadman style	√				
					emergency stop switch fitted					
1.3	the plant tipping or rolling	√			rig has very low centre of gravity	√		80% of mass is below 1.5m height		
					rig is stationary when working	√				
1.4	being thrown from the plant	√			No-one in cabin when traversing	√		signed at cabin doorway (lockable)		
					seat belts fitted in driver cabin	√				
1.5	coming into contact with sharp objects	√			engine is isolated and guarded	√				
					no visible signs of sharp objects	√				

2 STRIKING - Can any person be struck by moving parts due to:

2.1	working pieces being ejected	√			push head is purpose-designed	√		only work pieces are CPT push rods these cannot be ejected from the slow-moving purpose-designed pusher system		
					push-pull clamps restrain rods	√				
					pusher moves slowly - 2cm/sec	√				
					"nip point" decals fitted	√				



ABN 46 091 597 661

20 Jensen Rd Banyo 4014

Insitu Geotech Services Pty Ltd



PLANT HAZARD ASSESSMENT

RIG: "EUNICE" – Truck-mounted Testing Rig

SITE/PROJECT: Generic Project

RISK ASSESSMENT

No	Potential Hazard	Checked			Control Methods in Place	Adequate		Notes on Existing Controls or Additional Control Required	Action Date	Done Date
		Yes	No	N/A		Yes	No			
2.2	mobility of plant travelling	√			reversing/travel alarm	√				
					amber flashing beacon	√				
					rear view mirror	√		not required – rig drives both ends		
					reversing lights fitted	√		traversing lights both ends		
					reversing camera fitted	√		not required – rig drives both ends		
2.3	controls unidentified	√			controls are all identified	√				
					and are labelled in clear English	√				

3 ENTANGLEMENT – Can anything become entangled in moving parts

3.1	in engine area	√			rig engine is isolated and lockable	√				
					rig engine is fully guarded	√				
3.2	in cabin during testing	√			pusher moves slowly - 2cm/sec	√				
					"nip point" decals fitted	√				

4 FALLING – SLIPPING – Can any person fall/slip due to:

4.1	lack of proper work platform	√			work cabin is purpose-designed	√				
					floor has non-slip surfaces	√				
4.2	lack of proper stairs/steps	√			cabin floor is only 1.5m high	√		potential fall-height is very low		
					steps to cabin are purpose-built	√		3-points of contact provided		
4.3	lack of guardrails / handrails	√			hand-holds provided in doorway	√		doorway is only relevant location		
4.3	poor housekeeping	√			no visible lubricant leakage	√				
					no consumables used in operation	√		ie no litter build-up		
					work area is purpose-designed	√				

5 ERGONOMIC – Can any person be injured due to:

5.1	poor seating	√			drivers seat in good condition	√				
					operators seat in good condition	√				

Prepared and Issued By: Allan McConnell

This document is a guide to identified hazards on IGS mobile plant. A Safe Work Statement (SWMS) is required to identify workplace hazards

15/08/2011



ABN 46 091 597 661

20 Jensen Rd Banyo 4014

Insitu Geotech Services Pty Ltd



PLANT HAZARD ASSESSMENT

RIG: "EUNICE" – Truck-mounted Testing Rig

SITE/PROJECT: Generic Project

RISK ASSESSMENT

No	Potential Hazard	Checked			Control Methods in Place	Adequate		Notes on Existing Controls or Additional Control Required	Action Date	Done Date
		Yes	No	N/A		Yes	No			

5.2	constrained body effort	√			all controls are in operator's reach	√				
-----	-------------------------	---	--	--	--------------------------------------	---	--	--	--	--

6 HIGH TEMPERATURE – Can any person be burnt due to contact with hot parts:

6.1	around engine area	√			engine is quite separate to cabin	√				
					engine is guarded	√				
					exhaust is high – out of reach	√				
6.2	in cabin during operation	√			no engine or exhaust access	√		observations indicate hydraulics may become hot but not scalding		
					hydraulic system is external	√				
					hydraulics guarded and locked					
					hydraulic hoses are wrapped	√				
					hot warning decals fitted	√				

7 ELECTRICAL – Can any person be shocked due to:

7.1	coming into contact with live electrical conductors	√			240v wiring is tagged and tested	√				
					no access decals fitted	√				
7.2	lack of tag out procedure	√			tag out procedure is in place	√				
7.3	damaged leads & switches	√			no visible signs of damage	√				
					all devices are tested and tagged	√				
					all is protected by safety switches	√				
7.4	batteries are not protected	√			batteries are in locked box	√				

8 OTHER HAZARDS – Can any person be injured due to:

8.1	fumes or dust	√			engine fumes are outside cabin	√				
					doors & windows seal adequately	√				
8.2	noise	√			noise in cabin ~83db full power	√		noise is intermittent – PPE used		



ABN 46 091 597 661

20 Jensen Rd Banyo 4014

Insitu Geotech Services Pty Ltd



PLANT HAZARD ASSESSMENT

RIG: "EUNICE" – Truck-mounted Testing Rig

SITE/PROJECT: Generic Project

RISK ASSESSMENT

No	Potential Hazard	Checked			Control Methods in Place	Adequate		Notes on Existing Controls or Additional Control Required	Action Date	Done Date
		Yes	No	N/A		Yes	No			

9 OPERATOR – Have the following areas been addressed:

9.1	Is the operator trained and qualified to operate this plant	√			in-house trained by IGS construction industry card holder drivers hold HR min licences	√ √ √		no external rig training available		
-----	---	---	--	--	--	-------------	--	------------------------------------	--	--

10 DOCUMENTATION – Can documentation be provided:

10.1	Operation Manual issued	√			rig purpose-built testing systems truck	√ √ √		no unitised manual exists manual available for CPT & DMT kept on board		
10.2	Servicing and Maintenance records	√			records maintained by company	√		available on request		

11 STRUCTURE – Can any person be injured due to structural defects

11.1	Design Certificate	√			records maintained by company	√		available on request		
------	--------------------	---	--	--	-------------------------------	---	--	----------------------	--	--